



**INDIAN HEALTH SERVICE**  
**National Pharmacy and Therapeutics Committee**  
**Formulary Brief: Influenza Treatment & Prevention**  
**-August 2023-**



**Background:**

Influenza immunization and antiviral treatment was covered in the August 2023 NPTC meeting. Antiviral medications for influenza were last discussed in [November 2019](#) and at that time oseltamivir was added to the [National Core Formulary](#). Since that review, there has been additional clinical evidence gathered on the available medications. There have been no additional antiviral therapeutic agents for influenza approved since the last review. The evidence to support utilization of antiviral therapy for influenza is modest and no therapeutic option appears superior to oseltamivir. As such, the Committee made **no modifications to the National Core Formulary** following this review.

**Discussion:**

Influenza virus infection occurs seasonally. American Indian and Alaskan Native (AI/AN) people are considered a high-risk group for severe influenza and complicated infection, as are children under the age of 2 years, pregnant people and adults 65 years and older.<sup>1</sup> Prevention of infection through immunization is recommended for all people 6 months of age and older, especially those in high-risk groups. Immunization is also shown to prevent complication in the case of breakthrough infection for those who are immunized. Immunization prevented influenza infection by approximately 44% for adults who received it in 2022-2023 season.<sup>2</sup> Immunization reduced risk of all-cause hospitalization among elders with severe influenza infection.<sup>3</sup> Immunization reduced cardiorespiratory mortality for those at high risk who suffer breakthrough influenza infection.<sup>4</sup> Immunization prevented ICU admission in children who experience breakthrough infection.<sup>5</sup> Every effort should be made to utilize immunization for all people 6 months of age and older to prevent infection and the complications of infection. The IHS [E3 Vaccine Strategy](#) (Every Patient, Every Encounter, Every Recommended Vaccine, when appropriate) was highlighted during the committee meeting.

Influenza antiviral drugs include the neuraminidase inhibitors oseltamivir, zanamivir, and peramivir. Baloxavir is the only drug in the class of drugs known as endonuclease inhibitors. The U.S. Centers for Disease Control and Prevention (CDC) Influenza guidelines recommend oseltamivir for adults at high risk for severe or complicated influenza, and those admitted to the hospital for influenza infection. Children less than 2 years old and pregnant people are also considered at risk for severe and complicated influenza and oseltamivir is the recommended agent for them. Initiation of antiviral therapy is most beneficial when started within 48 hours of symptom onset and there should be no delay of initiation due to testing.<sup>1</sup> Evidence for benefit in healthy adults is limited to demonstration of a decreased time from onset of infection to resolution of symptoms from about 7 days to just over 6 days on average and treatment does not reduce hospitalization rate.<sup>6</sup> Use in healthy adults can be considered when started within 48 hours of illness onset.<sup>1</sup> Neuraminidase inhibitors in at-risk adults provide a benefit of decreased risk for death or ventilator support for those who get admitted with influenza-related pneumonia.<sup>7</sup> Baloxavir has a similar time to resolution of symptoms in healthy individuals when compared to oseltamivir.<sup>8</sup> Baloxavir has not been studied in people with severe or complicated influenza, children below 5 years of age, or pregnant or breastfeeding people.<sup>9</sup>

CDC Guidelines recommend immunization to prevent influenza. Post-exposure prophylaxis with antiviral medication can be considered in people at high risk for severe or complicated influenza, when they are exposed to a person with active influenza infection. Pre-exposure prophylaxis for influenza is not generally recommended but can be considered in a very limited number of situations including severe immune suppression from illness such as Acquired Immune Deficiency Syndrome or bone marrow transplant or in the context of an institutional influenza outbreak.<sup>1</sup>

**Findings:**

Annual influenza immunization is the single most effective intervention to prevent infection, morbidity, and mortality from influenza. When clinicians encounter breakthrough infection or infection in those who have not been immunized, antiviral therapy for influenza is supported by guidelines. Early initiation of antiviral therapy for influenza is important to realize benefit. Antiviral therapy can augment influenza immunization for prevention of morbidity and mortality associated with influenza, especially in people at risk for severe or complicated influenza. Oseltamivir remains the sole influenza antiviral agent on the IHS National Core Formulary.

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*If you have any questions regarding this document, please contact the NPTC at [IHSNPTC1@ihs.gov](mailto:IHSNPTC1@ihs.gov) . For more information about the NPTC, please visit the [NPTC website](#).*

**References:**

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